The Valued Child. In Search of a Latent Attitude Profile that Influences the Transition to Motherhood

L'enfant valorisé. A la recherche de profils latents influençant la procréation du premier enfant

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Abstract In this research, a latent class analysis is used to identify latent attitude profiles that influence the transition to the first child. We argue that ideational theories, i.e. the Second Demographic Transition theory and the extended model of Planned Behaviour, often refer to a broad range of attitudes or values that are hypothesized to influence behaviour, and as such describe an attitude or value profile that inhibits vs. fosters the likelihood of motherhood. The results demonstrate the usefulness of a latent class approach and reveal that quite different latent attitude profiles may lead to an increased likelihood of motherhood. However, only one latent attitude profile clearly inhibited the hazard of a first birth, i.e. an egalitarian profile that dissociates with "traditional" views on familistic issues regarding marriage, children, partnership and household roles, and at the same time stresses the importance of autonomy and independence.

Keywords Motherhood · Attitude profile · Latent class analysis

Résumé Dans cette étude nous faisons appel à l'analyse en classes latentes pour identifier des profils d'attitudes latents à même d'influencer la procréation du premier enfant. A la base, une réflexion sur les théories idéationnelles telles que la théorie de la deuxième transition démographique et la théorie étendue du comportement planifié, qui se réfèrent à toute une variété d'attitudes et de valeurs exerçant une influence sur le comportement, et par conséquent à des attitudes ou systèmes de valeurs à même de réduire ou d'accroître la probabilité de procréation du premier enfant par les femmes. Les résultats démontrent l'intérêt d'une approche par profils latents et révèlent que des profils très différents peuvent conduire à une

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élévation de cette probabilité. Cependant, seul un certain type de profil mène clairement à un abaissement de la probabilité de procréation du premier enfant: il s'agit du profil égalitaire, qui s'affranchit des visions traditionnelles sur les questions de mariage, enfants et rôles des partenaires, et en même temps accorde de l'importance aux notions d'autonomie et d'indépendance.

Mots clés   maternité · profils latents · analyse en variables latentes

1 Introduction

The effect of ideational factors on demographic behaviour has been a long-standing theme. When attitudes and values are involved, the majority of studies have applied statistical methods that typically refer to a dimensional approach, i.e. calculating the reliability of summated rating scales, exploring dimensionality by means of exploratory factor analysis, or applying confirmatory factor analysis. Of course, dimensional models are appropriate in many situations, but there are cases in which it is more reasonable to assume that there are different types of individuals or different types of attitude profiles (Eid et al. 2003). Consider, for instance, the example of reasons to marry. These reasons might include a whole range of aspects referring to romantic, normative, economic, emotional and symbolic aspects of marriage that are difficult—if not impossible—to order on one or more continua. Some individuals might focus on the romantic and symbolic aspects of marriage, whereas others are motivated by the material and legal benefits of the marital status. There might also be a category of people whose only reason to marry is "for the sake of children", and nothing else, and so forth. Looking for attitude profiles or empirical typologies that distinguish these different categories is then the issue. Researching attitude profiles is also appropriate when a theory reflects on a broad range of attitudes that are hypothesized to be related to demographic behaviour. Family values, for instance, include attitudes referring to children, cohabitation, marriage, and household roles. Autonomy values, such as attitudes towards education, career, personal freedom and self-development, are presented as competing alternatives (Barber 2001). However, some people might value children while at the same time expressing a need for personal freedom, and do not consider marriage as the tie that binds. Others might solely focus on work and nothing else, etc. Again exploring an empirical typology of attitude profiles may prove valuable.

This article contributes to the study of attitudes and demographic behaviour in two ways. First, we develop arguments about the relevance of distinguishing attitude profiles in explaining the transition to motherhood from a substantive point of view, including reference to the Second Demographic Transition (Lesthaeghe 1994), as well as to the expanded Fishbein and Ajzen model (Barber 2001) for explaining the attitude–behaviour linkage. Attitude profiles are identified by means of a latent class (LC) cluster approach. Second, we explain and demonstrate the usefulness of this latent class approach in exploring the latent profiles of attitudes and in constructing an empirical typology. This empirical typology is then applied to the transition to motherhood among a sample of young women aged 18–30 at the

time of the first interview. The data is from the German "Familienentwicklung in Nordrhein-Westfalen" panel study conducted in the 80s.

Given these research questions, a panel design was needed, in which a fairly large set of attitudes was measured prior to the transition. After all, the relationship between attitudes and parenthood is reciprocal with attitudes influencing parenthood, and parenthood subsequently influencing attitudes. Panel studies in which a fairly large set of attitudes is included from the first wave of the project are rare. The data used in this research include such a large list of attitudes. On the downside, however, the sample is only made up of women living in Nordrhein-Westfalen, Germany and the surveys were conducted in the 80s. These characteristics of the data define the context of our research.

2 Theoretical Framework: Arguments for a Typology Approach in Attitude Research

Among the most influential theories that link ideational factors to demographic behaviour are (a) the Second Demographic Transition theory (Lesthaeghe and van de Kaa 1986) and (b) Fishbein and Ajzen's models of reasoned action and planned behaviour (Fishbein and Ajzen 1975; Ajzen and Fishbein 1980). The first originates from a more sociological perspective, whereas the latter is more closely related to social psychology. This distinction is not merely artificial. The two perspectives also differ in the type of ideational factors upon which they focus. Value orientations are the key concept in the Second Demographic Transition theory, whereas attitudes and intentions play a prominent role in the Fishbein and Ajzen model. However, it is our opinion that one should not exaggerate this difference in terminology, since the concept of value orientations—the concept most often used in sociology—is closely related to what could be labelled as "generalized" attitudes in social psychology.

2.1 The Second Demographic Transition Theory

The concept of the Second Demographic Transition was first introduced in a Dutch article by Lesthaeghe and van de Kaa in 1986, but the "germination of the idea" (van de Kaa 2002) was already present in earlier work (Lesthaeghe 1980, 1983; van de Kaa 1980, 1985), and the arguments have been repeatedly discussed and updated in subsequent research (Lesthaeghe and Surkyn 1988; Lesthaeghe 1994; Lesthaeghe and Moors 1996; van de Kaa 1994). A key proposition of this theory, which is relevant for this research, is that demographic changes in living arrangements that were witnessed during the late 1960s and early 1970s and continued to persist afterwards, were the expression of values reflecting secular, anti-authoritarian opinions and an egalitarian world view with greater emphasis on higher-order needs such as self-actualization, expressive values and recognition (Lesthaeghe and Surkyn 2004). Empirically, this raises a 2-fold question: "do values matter?" (Lesthaeghe and Moors 1994) and "which values matter?" (Lesthaeghe and Surkyn 2004). In the latest update of the relationship between values and the Second Demographic Transition, Lesthaeghe and Surkyn (2004) list the following values:

secularization, a "new" political left, egalitarianism, civil morality and ethics, expressive values, companionship and unconventional marital ethics. For the sake of clarity, the Second Demographic Transition theory does not claim that values are the sole explanation of demographic changes, rather it argues that values complement other types of explanation (Lesthaeghe 2001). What is important here, is that a very broad set of values has been suggested to be relevant and that this divergent set is "pushing" demographic changes in a consistent direction. Much of the empirical evidence for these arguments draws upon the European Values Studies, a large international cross-sectional survey series that started in 1981, with two consecutive studies in 1990 and 1999. As such, these studies merely illustrate what Lesthaeghe and Moors (2002) have called the "footprints" of the recursive effect of values and living arrangements. They provide footprints, since cross-sectional data merely indicate an association between values and demographic behaviour but do not consider the extent to which values influence behaviour or vice versa (Moors 2000). In this research we move beyond the footprints by using panel data that allow to estimate the effect of attitudes measured before making the transition to motherhood. Nevertheless, various approaches are used in these studies to link values with demographic characteristics: a dimensional approach using factor analysis or Guttmann scaling (Lesthaeghe and Meekers 1986; Lesthaeghe and Moors 1996), a single factor approach trying to identify the single most important continuous latent dimension in a large set of items (Lesthaeghe and Surkyn 1988) and repeated single item analyses looking for similarities between demographic characteristics and a large series of attitude items (Lesthaeghe and Surkyn 2004). These approaches, although different, share a common perspective, i.e. the search for regularities in the pattern of association between attitudes and demographic behaviour with a primary focus on the content of the items. A different approach is to focus on similarities between individuals in terms of their integrated view on a range of attitudes. In this approach, one wants to identify distinct segments in the population that differ in terms of their attitude profile. The question is relevant: are there segments in the population whose attitude profile reflects the attitude profile sketched by the Second Demographic Transition theory? In this research, this is the primary focus and the key question will be to determine whether there is a latent attitude profile that inhibits the transition to motherhood.

2.2 The "Expanded" Fishbein and Ajzen Model

For obvious reasons, we first focused on the Second Demographic Transition theory. After all, from this perspective, with its emphasis on a broad range of attitudes and values, a theoretical profile of value orientations has been developed that is assumed to be related to changes in living arrangements of young adults since the late 60s. For readers who are familiar with the Fishbein and Ajzen model, the relevance of an approach focusing on constructing an empirical typology of attitude profiles is perhaps less obvious. Whereas the Second Demographic Theory refers to general values, the Fishbein and Ajzen model refers to attitudes that are more specific. Ajzen defines attitudes as dispositions "to respond favourably or unfavourably to an

object, person, institution or event" (1988, p. 4). These attitudes towards a particular behaviour influence intentions that in turn influence behaviour. By consequence, the concept of attitudes is much more focused or narrowed down to the subject of the behaviour of interest. In terms of motherhood, this framework would primarily focus on attitudes regarding motherhood and family planning (Vinokur-Kaplan 1978). However, as Barber (2001, see also: Barber et al. 2002) has illuminatingly argued, Fishbein and Ajzen's framework can be easily expanded by including attitudes that refer to alternative or competing behaviour such as education, work and consumer spending. Presumably, leisure activities could be added to complement the list. Barber (2001) claims that attitudes towards these alternative behaviours influence the ultimate behavioural choice mainly because our behavioural choices are limited by the finite nature of time and resources. Hence, it is often difficult to fulfil particular roles such as motherhood in conjunction with other roles.

However, this does not imply that multiple role involvement, by definition, has a negative outcome.[1] The role enhancement perspective (Jackson 1997) for instance, argues that there are personal gains to multiple roles, but that these gains might differ for different groups (see also: Ahrens and Ryff 2006). Research by Moen et al. (1989, 1992) revealed better health outcomes and a tendency to live longer among women who occupied more roles compared to women who occupied fewer roles. This shows that work roles are not necessarily incompatible with household roles. The consequence of expanding the Fishbein and Ajzen framework is, of course, that it broadens the research question, e.g. how is motherhood influenced by attitudes towards children, marriage, household, work, self-actualization and personal freedom? Again, this question can be retranslated by referring to segments in the population, i.e. which persons are more likely to make the transition to motherhood? Are hedonistic people the least likely, or is a positive value for children sufficient to make the transition, regardless of whether one favours other roles in preference to parental roles in life?

This research starts with an exploratory search for an empirical typology clustering persons with similar views on a set of attitudes. As such, no hypotheses about the likelihood of particular attitude profiles are defined. Our selection of attitudes is also less extensive than the list provided in the context of the Second Demographic Transition. This was not a matter of choice but rather a restriction due to secondary data analysis. The questionnaire, however, included 26 items covering seven attitudinal issues such as the meaning of having children, opinions about marriage, the quality of the relationship, autonomy, socio-economic success, etc. In the next section, we present the data and the results from the latent class approach that was used to identify latent attitude profiles. It is important to note, however, that this list of items could have been selected from the extended Fishbein and Ajzen framework as well as from the perspective of the Second Demographic Transition. By consequence, this research is not about testing the significance of these two ideational approaches against each other. Instead, our key argument is that within the context of each of these theoretical frameworks, it

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[1] This suggestion about the possible gains of multiple roles has been pointed out by an anonymous reviewer whose contribution to this article we gratefully acknowledge.

makes sense to adopt a research approach that clusters persons with similar attitude profiles.

3 Data, Measures and Methodology

3.1 Data

In this study we present findings from a three-wave German panel study "Familienentwicklung in Nordrhein-Westfalen" conducted in 1982, 1984 and 1986 by the "Institut für Bevölkerungsforschung und Sozialpolitik" at the University of Bielefeld. Data are publicly available from the "Zentralarchiv für Empirische Sozialforschung" in Köln (ZA-N 1736-38). Additional information on the project is presented in Kaufmann and Strohmeier (1987). The initial random sample consisted of 2,620 women aged between 18 and 30 years old. Little information is provided about the response rate at the first wave of the study, but the drop-out rate between waves is considerable: 65% participated in the second wave, 40% in the third wave. However, this drop-out rate has been analyzed in greater depth[2] (Moors 1997) and the findings can be summarized as follows:

(a) A large share of losses to follow-up were due to the fact that about 30% of respondents did not sign a declaration at the end of the interview which would have allowed the researcher to store the contact address and get in touch with them for the next wave of the study.
(b) Descriptive characteristics of drop-outs revealed that the losses were probably also caused by difficulties in locating respondents for the follow-up interviews. Drop-outs were on average younger, less frequently married, and still living with their parents at the time of the interview and had fewer children. This profile is typical of a category with a higher risk of moving.
(c) Minor differences in attitudes measured at first interview were found between drop-outs and participants in several waves, suggesting that drop-outs were somewhat less "traditional" in family issues and more focused on "autonomy" issues.
(d) However, the correlations between attitudes and socio-demographic characteristics were not significantly different between drop-outs and participants in several waves, suggesting that drop-out was a missing at random process.

Given these findings, it is concluded that the panel data can be used to elaborate on the questions raised in this research.

3.2 Measures

An attractive feature of the "Familienentwicklung in Nordrhein-Westfalen" project is that the questionnaire included a fairly large set of attitudes covering different aspects of family life. For a large set of items referring to different aspects, the data

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[2] Information available on request from the author.

Table 1 A latent class typology of attitudes: model selection

No. of classes	L^2	$BIC(L^2)$	$AIC(L^2)$	df	Bootstrap p-value	SE
1	16578.119	10640.599	14832.119	873		
2	14602.212	8848.326	12910.212	846		
3	14062.531	8492.280	12424.531	819		
4	13645.277	8258.661	12061.277	792		
5	13399.563	8196.581	11869.563	765		
6	13166.461	8147.114	11690.461	738	0.36	0.02
7	12996.779	8161.066	11574.779	711		

are often screened by means of an exploratory factor analysis. We have conducted such an exercise including the items that are used in this research. In Table 1 we present the list of items grouped according to the seven factors that emerged from the exploratory factor analysis. This grouping of variables provides a substantive meaning to the subsets. However, we do not assign any further weight to this exploratory factor analysis since this research introduces a latent class cluster approach in identifying categories of respondents with a similar attitude profile. Running ahead of our analyses, however, it is worth noting that in terms of data reduction, traditionally regarded as a main feature of factor analysis, a latent class analysis is even more parsimonious since it produces only one latent variable. The difference is, of course, that factor analysis in this example identified seven continuous dimensions, whereas the latent class analysis presented in the next section produces only one nominal variable with six latent classes.

3.3 Methodology: Latent Class Analysis

Latent class (LC) analysis has hardly ever been applied in social demography. Even cluster analysis—which is a similar approach—is rarely used. This is not the place for a lengthy and technical discussion of the latent class approach, which has been presented elsewhere (e.g. Hagenaars 1990; Vermunt 1997; Vermunt and Magidson 2005). A short intuitive introduction to the model and its benefits, however, is necessary.

The major objective of a latent class analysis is to classify similar objects into a set of N latent classes. The number of classes and their sizes are not defined in advance. Objects that belong to the same latent class are similar with respect to the observed attitude variables included in the analysis. Given its similarity to the more commonly known cluster analysis, this approach is labelled as a latent class cluster analysis (Vermunt and Magidson 2005). An important difference between traditional cluster approaches and latent class clustering, however, is that the latter is a model-based approach, and by consequence the choice of the cluster criterion is less arbitrary. Latent class clustering uses a maximum likelihood method for estimating the parameters of the model by maximizing the log-likelihood function. A supplementary advantage is then, according to Vermunt and Magidson (2005), that no decision needs to be made regarding the scaling of the observed variables,

e.g. even working in a situation with normal distributions with unknown variances, the results would be the same irrespective of whether the variables are normalized or not. The latent class cluster approach adopted in this research is typical of any analysis of this sort. The first step (Table 1) involves the selection of an appropriate model, meaning that we need to decide on the number of latent classes that can be identified. Model selection tools used for this purpose are information criteria such as AIC and BIC (Fraley and Raftery 1998). BIC has the advantage of taking sample size into account. The overall fit of the selected model is estimated by calculating the bootstrap Chi-square of the model (Langeheine et al. 1996). A bootstrap approach is advised when dealing with sparse tables, often the case when a large set of items is involved. In the second step (Table 2), we present the parameters (betas) of the "best" fitting model together with their associated standard errors. Effects are estimated for each latent class on each observed attitude variable, and hence, a "meaning" can be assigned to each latent class in much the same way as in factor analysis: "strong" betas indicate which items relate to which latent class. Note that betas do not have an upper limit but, as a rule of thumb, the strength of a beta is evaluated relative to its standard error, i.e. when the absolute value of beta is larger than twice its standard error (=z-value) the effect size of beta is considered to be strong.

The final step in the estimation process is, of course, the classification of respondents into classes on the basis of the posterior class membership probabilities (Vermunt and Magidson 2005). Modal allocation is used, which amounts to assigning each respondent to the class with the highest posterior probability.[3] The outcome is one nominal latent class variable that can be used as the ideational covariate assumed to influence the transition to motherhood in a subsequent event-history model. Details of the latter model are presented after the results from the latent class cluster analysis.

4 Results of a Latent Class Cluster Approach

Table 1 includes the model selection statistics and Table 2 presents the model parameters of the selected best fitting model with six latent classes. Attitude variables are grouped according to the results from an exploratory factor analysis that identified seven dimensions. Four sets of issues refer to "familistic attitudes" and three sets of issues to "autonomy and self-development" attitudes. As mentioned in the previous section, we only use this exploratory factor analysis as a heuristic tool for grouping items, which also facilitates interpretations of the latent

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[3] The assignment of respondents to one particular latent class introduces some measurement bias. However, latent class analysis also makes it possible to estimate the respondent's probability scores of belonging to a particular latent class, which is less biased. In this case, six probability scores related to the six latent classes could be calculated for each respondent. The problem with using these probability scores rather than the single latent class typology in this research is that the sum of probability scores is equal to one, and hence, produces ipsative measures that are difficult to control and interpret in the subsequent event history models. Note that the bias introduced by assigning respondents to a particular class is similar to assigning a scale score in a dimensional approach such as factor analysis. Only structural equation models to estimate a measurement model simultaneously with a structural model including covariates fully deals with the issue of measurement error.

Table 2 A latent class typology of attitudes: item description and latent class coefficients

	LC 1		LC 2		LC 3		LC 4		LC 5		LC 6	
	Size 25.3%	SE 1.8%	Size 23.1%	SE 1.9%	Size 17.6%	SE 1.8%	Size 14.5%	SE 1.5%	Size 12.4%	SE 1.6%	Size 7.1%	SE 1.1%
	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE	Beta	SE
Familistic attitudes												
The meaning of children												
Life only has meaning through children	−0.542	0.212	1.944	0.234	2.177	0.289	−2.757	0.514	−1.544	0.378	0.721	0.291
Having children is the most important thing for a woman	−0.806	0.262	1.368	0.221	2.233	0.251	−2.522	0.655	−1.410	0.509	1.137	0.318
Children give meaning to one's life	−0.538	0.219	2.005	0.294	2.649	0.469	−3.406	0.579	−1.437	0.323	0.726	0.347
By having children one truly becomes a woman	−1.144	0.337	1.356	0.240	2.051	0.261	−2.801	0.852	−0.877	0.417	1.416	0.316
The meaning of marriage												
A relationship becomes stronger through marriage	−2.009	0.225	1.018	0.218	1.432	0.284	−1.690	0.241	2.044	0.442	−0.796	0.301
Through marriage a relationship becomes a deeper bond	−2.128	0.397	1.592	0.245	1.778	0.281	−3.296	0.758	2.059	0.354	−0.005	0.333
Important to marry when a good partner has been found	−1.506	0.245	1.274	0.179	1.473	0.215	−2.101	0.361	1.121	0.240	−0.261	0.315
When one wishes to start a family it is important to marry	−1.088	0.168	0.976	0.219	1.353	0.279	−1.546	0.215	1.222	0.336	−0.918	0.280
The importance of being a good family member												
Important to be a good mother	2.365	0.667	2.690	0.626	1.362	0.574	−2.399	0.293	−1.086	0.310	−2.931	0.387
Important to be a good partner	1.447	0.638	1.384	0.619	0.598	0.501	−1.023	0.347	0.393	0.594	−2.800	0.345
Important to have a good family life	0.729	1.452	1.407	1.625	4.049	6.966	−2.525	1.401	−0.852	1.418	−2.809	1.391
Important to have children	1.300	0.247	2.734	0.394	1.318	0.294	−3.480	0.707	−0.446	0.279	−1.425	0.345
Household role duty												
It is my duty to manage the household	−0.618	0.179	1.106	0.164	0.586	0.181	−1.108	0.259	0.284	0.216	−0.249	0.297
I am of more use to my family managing the household then having a paid job	0.015	0.205	1.014	0.176	−0.071	0.246	−1.145	0.366	−0.053	0.284	0.240	0.325

Table 2 continued

| | Latent class size | | | | | | | | | | | | | | | | | |
| | LC 1 | | | LC 2 | | | LC 3 | | | LC 4 | | | LC 5 | | | LC 6 | | |
	Size 25.3% Beta	SE 1.8% SE		Size 23.1% Beta	SE 1.9% SE		Size 17.6% Beta	SE 1.8% SE		Size 14.5% Beta	SE 1.5% SE		Size 12.4% Beta	SE 1.6% SE		Size 7.1% Beta	SE 1.1% SE	
Even when a woman has a paid job, the household is mainly her responsibility	**−1.377**	0.276		**1.019**	0.168		**0.621**	0.197		**−0.999**	0.289		0.242	0.237		0.494	0.295	
For a woman her family is her primary goal in life	−0.391	0.192		**1.610**	0.183		**1.110**	0.197		**−1.998**	0.392		0.220	0.235		−0.551	0.336	
Autonomy and self-development																		
The importance of socio-economic success																		
Important in life: self-development	0.284	0.209		**−1.576**	0.185		**1.401**	0.372		0.429	0.281		0.264	0.290		**−0.802**	0.294	
Important in life: professionally getting ahead	**−0.481**	0.170		**−1.507**	0.193		**1.888**	0.400		0.083	0.217		0.417	0.276		−0.400	0.291	
Important in life: having a job oneself	**−0.506**	0.187		**−1.559**	0.185		**1.500**	0.388		**0.869**	0.324		0.213	0.296		−0.516	0.291	
The social meaning of a job: recognition																		
Only by having a job a woman can manifest herself	**−1.060**	0.185		**−0.972**	0.190		**1.096**	0.215		0.212	0.192		**0.517**	0.220		0.207	0.263	
Only by having a job women gain real recognition	**−1.191**	0.194		**−1.052**	0.195		**1.154**	0.217		**0.446**	0.194		**0.691**	0.231		−0.047	0.270	
Only by having a job a woman becomes independent	0.055	0.209		**−0.466**	0.193		**0.888**	0.344		0.056	0.251		**1.168**	0.417		**−1.700**	0.292	
The importance of personal freedom, hedonism																		
Important in life: going out a lot, doing things	**−0.342**	0.155		**−0.837**	0.163		**0.385**	0.184		**0.724**	0.193		−0.184	0.213		0.255	0.268	
Important in life: travel a lot, seeing things	−0.151	0.162		**−1.177**	0.164		**0.528**	0.214		**0.905**	0.227		0.319	0.241		−0.423	0.260	
Important in life: personal freedom	0.073	0.202		**−1.213**	0.173		**0.662**	0.309		**1.140**	0.339		0.085	0.272		**−0.747**	0.282	
Important in life: being independent	**−0.672**	0.160		**−1.466**	0.183		**0.386**	0.195		**1.021**	0.228		0.040	0.225		**0.692**	0.288	

Significant beta-values (> two times their SE) are printed in bold

class analysis. Significant betas, i.e. whose values are more than twice its standard error, are reported in bold. Latent Gold 4.0 is used to estimate the models. The latent class analysis uses a log-linear parameterization of the effects. As with any log-linear analysis, constraints are imposed on the log-linear parameters (betas) to make them identifiable (Vermunt 1997). In the analyses reported in this research, parameters should be interpreted relative to the mean. Hence, negative betas refer to "less than average" whereas positive betas indicate the opposite.

The first step of the analysis involved repeated models in which the number of latent classes was increased up to and as far as seven. Comparison of the BIC(L^2) of these consecutive models (Table 1) suggested that a model with six latent classes fitted the data best.[4] Furthermore the L^2 bootstrap p-value (=.36) of this model was significant. The estimated class sizes range between 25 and 7% with associated standard errors between 1.1 to 1.9%. This means that each class is represented by a fair number of respondents. Latent classes are ordered by decreasing size.

The next question is how to interpret the different latent classes (Table 1). The first latent class tends to have lower than average scores on almost all familistic as well as autonomy issues, except for issues referring to the importance of being a good family member. Hence, the quality of the family relationship prevails, but it is not combined with a rather "traditional" view on the meaning of children, marriage and household, nor is it combined with valuing "autonomy and self-development". To the extent that familistic and autonomy attitudes can be regarded as attitudes referring to competing roles (Barber et al. 2002), this category does not identify with either role. The second latent class clearly distinguishes between familistic and autonomy issues with, respectively, strong positive vs. negative effects. Attitudes towards family life are far more valued than attitudes towards autonomy and self-development. For this category, family role attitudes prevail over competing autonomy and self-development issues. This refers to what Goldthorpe (1987) has described as a traditional view on family relationships, and the attitude profile also fits with Hakim's description (2003) of a home-centred lifestyle preference of women. Goldthorpe also identifies a category that tries to balance both family and non-family roles and, as such, values both sets of attitudes. This "equivalence" type corresponds with the third latent class that exhibits positive effects on nearly every issue and reflects the adaptive lifestyle preference described by Hakim (2003). Since women from this class positively value both family and non-family roles, they demonstrate readiness for being involved in a larger number of roles (Ahrens and Ryff 2006). The fourth latent class constitutes, to a large extent, the counterpart of

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[4] Rigidly adopting a particular statistical criterion for model selection is not always justified. Decisions should also be made on the basis of theoretical considerations. This is especially true if a theory a priori defines less latent classes than suggested by the statistical model. Hagenaars (1990) has suggested that whenever increasing the number of latent classes does not fundamentally change the identification of theoretical meaningful classes and only adds minor classes, it is advised to choose a more parsimonious model with fewer classes even if the fit statistic is somewhat lower. However, in exploratory research—as is the case here—no theoretical guidelines for selection are present. Hence, model selection is guided by statistical criteria. Furthermore, the substantive meaningful classes in this research were only clearly identified in the model with six classes. The less substantive categories already showed up in the analyses with three to five classes. It is our opinion that as long as an empirical latent class typology identifies meaningful types, then the classification is useful.

the second "traditional" type because it combines less than average importance given to familistic attitudes with positive valuation of items referring to personal autonomy. Self-development and orientation to work is only slightly more positively influenced. Adopting Goldthorpe's classification of family relationships, this category of women stresses egalitarian roles. The fifth latent class stresses the importance of two sets of issues, i.e. marriage and having a job. This is combined with assigning less than average meaning to having children while being neutral on personal freedom issues. The marital and working roles are not competing as such, and this particular category of young adult women demonstrates that more egalitarian views, as far as the work role are concerned, are not incompatible with more traditional views on marriage. However, traditional views on marriage are not complemented by traditional views regarding children. From the multiple role perspective, it seems that this class of women is balancing work and marital roles but is reluctant to take up the parental role. Finally, the sixth and last latent class primarily agrees with the attitudes relating to the meaning of having children, while at the same time indicating that having children is not that important for them, nor is being a good mother, a good partner or having a good family life. This "ambivalent" feeling is further demonstrated by the fact that they do not think that a relationship necessarily improves by marriage; that, for them, being independent is important but self-development is not; and that having a job does not, in their view, increase the independence of women. From a theoretical viewpoint, it is difficult to assign a substantive meaning other than indicating the ambivalence in attitudes. This ambivalence can mean several things. Attitudes or values may not have yet been clearly embedded in the respondents' minds, or the responses to the attitude questions may indicate "non-attitudes" (Converse 1970) or reflect response styles rather than "true" content (Billiet and McClendon 2000; Moors 2003). For this reason, empirically identifying such a class is valuable since it allows for a clearer definition of the theoretical substantive classes.

5 Linking Latent Class Profiles to Motherhood: Hypotheses, Controls and Method

The aforementioned interpretations about the meaning of the six latent classes are summarized in Table 3. Linking this empirical typology to the theoretical perspectives presented in this article, i.e. the Second Demographic Transition

Table 3 Summary of the empirical typology and hypothesized effects on motherhood

Latent class	Hypothesized effect
LC 1 "quality of family relationship"	+
LC 2 "traditional family oriented"	++
LC 3 "equivalence of roles"	+
LC 4 "egalitarian type"	–
LC 5 "marital status and work role"	–
LC 6 "ambivalence"	–

theory and the extended Fishbein and Ajzen model, allows for defining hypotheses about the effect of this latent class classification on the likelihood of motherhood.

The strongest effects of the latent class typology on motherhood are assumed for the two opposing latent classes that are positively oriented towards one particular set of items, and at the same time negatively oriented towards the competing set of attitudes. An egalitarian type (LC 4) would inhibit motherhood because it values autonomy, but also disagrees with a traditional view of family roles. The traditional family type (LC 2) holds an opposite view and, hence, is the most likely category to make a transition to motherhood. These two latent classes come very close to the attitude profile that is sketched by the theoretical perspectives presented at the beginning of this research. As such, they are expressions of "ideal" types. The other latent classes deviate from these "ideal" types, but the particularities of their attitude profile also allow hypothesizing. The fifth type (LC 5) is also expected to be less inclined towards motherhood because it assigns a traditional meaning to marriage and stresses the importance of work, but does not claim that children give meaning to one's life. As indicated before, this class is reluctant to take up the parental role. Hypothesizing about the effect of belonging the sixth "ambivalent" latent class (LC 6) is perhaps less straightforward. If this category merely reflects an undefined attitude pattern, then no particular effect can be expected. However, because this category assigns little importance to having children and being a good mother, we expect a slightly lower chance of becoming a mother. This hypothesis is in agreement with the Fishbein and Ajzen model that assigns greater weight to personal attitudes that closely refer to the observed behaviour than to more general attitudes. A similar kind of reasoning can be applied to the first latent class (LC 1). This category finds having children important, as well as being a good mother and partner, but combines this with a less "traditional" evaluation of attitudes in regard to the meaning of having children and marriage. Again assuming that attitudes about a personal situation are more important than general attitudes, we expect a moderate positive effect of belonging to this first latent class on motherhood. Finally, we expect an average to moderately positive effect of belonging to the "equivalence" class (LC3) on motherhood. This category attributes equal importance to attitudes concerning family, work and personal freedom. They are not indifferent to any of these roles and the outcome of their decisions will depend on the balance they have established concerning the different roles they like to fulfil. Their readiness to take up multiple roles, however, increases the likelihood that they will choose the additional mother role.

At this point we would like to stress that values and attitudes are not the only factors influencing demographic transitions during young adulthood. The two theoretical perspectives on the attitude–behaviour relationship explicitly acknowledge that other factors are important. At the personal (micro) level there is considerable evidence (e.g. Barber 2001; Lesthaeghe and Surkyn 2004) that family antecedents and early adulthood experiences are significant. Including these characteristics is important since the relationship between attitudes and behaviour might also be influenced by these factors, which are related to both attitudes and behaviour. Thus statistically controlling for these background characteristics will help to reduce its spurious influence on the attitude–behaviour relationship.

Furthermore, it could be argued that attitudes are intermediate factors that partially link socio-demographic characteristics to behaviour. Take, for example, education. It is commonly known that educational attainment delays early adulthood transitions such as marriage and parenthood (Rindfuss et al. 1988; Thornton et al. 1995), and as Veevers (1980) has argued, postponement for a definite time might change to postponement for an indefinite time and, hence, childlessness. By consequence, education has a direct influence on the dependent variable in this research. However, education also influences the attitudes and values of adolescents and young adults. Values that are typically associated with higher education are the importance of thinking independently and self-development. Hence, part of the effect of education—as well as other background characteristics—on parenthood might be mediated by attitudes or values. In this research we select socio-demographic characteristics of the respondents at the time of the first interview. A first set of characteristics refers to family antecedents: educational level of the father and mother, whether the mother was working during the respondent's childhood, and how the respondent evaluates the quality of the parental relationship during childhood. A second set of characteristics includes birth cohorts as well as early adulthood experiences such as the duration of marriage and cohabitation, the respondent's educational level and the respondent's occupational situation and status. The latter variable combines the employment status (working or not at the time of the first interview) with the occupational status of the last job (blue, white collar, etc). These variables are included in the first step of the analyses. In a second step the latent class attitude variable is added.

Two other variables are also included in the analyses, i.e. religiosity and the intention to become a parent because they have a particular meaning in, the Second Demographic Transition theory and the theory of Planned Behaviour, respectively. Religiosity, in this research, combines religious denomination with affiliation and distinguishes between the following categories: Catholics with high or low affiliation; Protestants with high or low affiliation, other religious denomination and no religion. In this research we have added religiosity in the second step of the analysis, together with the LC typology of attitudes. Finally, the questionnaire includes a question regarding the respondent's expectation of becoming a parent within the next 2 years following the first survey. This variable is entered in the last step of the analyses for two reasons. First of all, in the extended Fishbein and Ajzen model, intentions are hypothesized to mediate the effect of attitudes on behaviour. A second reason to present a model with and without this intention variable is that, from a sociological point of view, an intention can be defined as a proxy of future (anticipated) behaviour and, hence, may be an alternative dependent variable, rather than an independent variable. Proponents of this perspective would exclude the intention variable altogether because the question is trivial. In this research we do not take a stand on the discussion over whether or not including intentions in models that explain behaviour is trivial, and we present both a model with and without the intention to become a parent.

We employ event-history techniques to estimate the effect of covariates on the timing of the first birth. This research focuses on the effect of attitudes or values on the likelihood of becoming a mother. For this reason it is obvious that attitudes and

values should be measured before the transition is observed. As a consequence, we needed to select a sample of women who were childless (and not pregnant) at the time of the first interview and who had participated in at least one of the subsequent waves of the panel study ($N = 815$). This selection inevitably imposed a timeframe on the event-history dataset that is defined by calendar time and starts at the time of the first interview. Following Yamaguchi's suggestion (1991) of including other time-axes that are expected to influence the transition to motherhood, we included three time-varying (ageing) covariates, i.e. time since first interview (which reflects the ageing of respondents in conjunction with cohort membership), cohabitation and marriage. Marriage and cohabitation are measured as length of marriage and cohabitation in years (=months/12) and change value for each month of observation in the person-month file that was constructed. The inclusion of time since first interview and the aging of the partnership (marriage and cohabitation) is crucial to the analyses to control for sample selection bias. After all the "real" entry into the risk set of becoming parent depends on the length of the relationship. In our research design, time at first interview is used as the starting date. By including information about the length of the partnership, the respondents entered the timeframe at different levels of durations of their relationship with a partner. As Yamaguchi (1991) argues, such left-truncated cases, i.e. cases for whom the "real" entry into the risk set is before the start of the observation frame, may be adequately included in the analysis if the duration information is included [see also Guo (1993) for an extensive discussion]. Note that in this particular case, "older" partnerships only contribute to explaining transitions at "older" ages and hence our models should be interpreted as analysing the conditional survival from first interview to the time the event occurred, given that one was *at risk* of experiencing that event in that particular period. Table 4 presents an overview of the variables in the analysis.

The programme used to estimate these models is Latent Gold 4.0. A Poisson rate model (Vermunt 1997) is estimated, which amounts to a log-linear piecewise exponential survival model. Such a model defines the "motherhood" dependent variable as a binomial count variable; the exposure is defined as the number of months since first interview; and a case ID is used to identify the number of person-months each respondent contributes to the person-period file. Table 5 brings

Table 4 Descriptives

	N	%
Motherhood		
No (remaining childless)	725	84.5
Yes (transition to motherhood)	133	15.5
Birth cohorts		
50–52	26	3.0
53–55	114	13.3
56–58	176	20.5
59–61	294	34.3
62–64	247	28.8

Table 4 continued

	N	%
Educational level of the father		
Primary and/or secondary 1 (until age 15)	597	69.6
Vocational/apprentice	111	12.9
Vocational	48	5.6
High school (abitur) or above	54	6.3
Educational level of the mother		
Primary and/or secondary 1 (until age 15)	637	74.2
Vocational/apprentice	141	16.4
Vocational	17	2.0
High school (abitur) or above	16	1.9
Mother was working during childhood		
No	567	66.1
Yes	291	33.9
Educational level of respondent		
Primary and/or secondary 1 (until age 15)	320	37.3
Vocational/apprentice	306	35.7
Vocational	170	19.8
High school (abitur) or above	60	7.0
Occupational situation and status		
Never worked	220	25.6
Currently not; blue collar	35	4.1
Currently blue collar	73	8.5
Currently not; white collar	82	9.6
Currently low-level white collar	98	11.4
Currently mid-level white collar	194	22.6
Currently high-level white collar	80	9.3
Currently self-employed	13	1.5
Other	63	7.3
Religiosity		
Catholic with high bond	299	34.8
Catholic with low bond	273	31.8
Protestant with high bond	83	9.7
Protestant with low bond	154	17.9
Other	10	1.2
Not religious	36	4.2
Intention to become a parent within 2 years		
No	722	84.1
Yes	135	15.7
Quality of the parental relationship (good–bad)	Mean	SE
	1.92	0.98

Table 5 Event-history analysis of the effect of the latent class typology, intentions and background characteristics on the hazard of a first birth (motherhood)

Predictors	Observed effects (bivariate)			Step 1 adjusted effects			Step 2 adjusted effects			Step 3 adjusted effects		
	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value
Birth cohorts												
50–52	0.251	0.336	0.000	−0.402	0.382	0.050	−0.278	0.408	0.110	−0.139	0.411	0.410
53–55	0.030	0.206		−0.300	0.226		−0.250	0.231		−0.203	0.230	
56–58	0.513	0.160		0.472	0.168		0.432	0.171		0.315	0.177	
59–61	−0.259	0.166		0.164	0.191		0.115	0.200		0.068	0.198	
62–64	−0.536	0.199		0.066	0.257		−0.019	0.267		−0.040	0.265	
Educational level of the father												
Primary and/or secondary 1 (until age 15)	0.340	0.176	0.290	0.092	0.230	0.820	0.058	0.232	0.840	0.040	0.234	0.820
Vocational/apprentice	0.133	0.240		−0.183	0.270		−0.205	0.287		−0.208	0.289	
Vocational	−0.323	0.376		−0.065	0.417		−0.072	0.441		−0.119	0.435	
High school (abitur) or above	−0.150	0.350		0.156	0.419		0.219	0.446		0.287	0.441	
Educational level of the mother												
Primary and/or secondary 1 (until age 15)	0.440	0.273	0.310	0.210	0.340	0.930	0.270	0.353	0.880	0.295	0.353	0.860
Vocational/apprentice	0.076	0.330		0.170	0.358		0.255	0.379		0.245	0.388	
Vocational	−0.276	0.685		0.014	0.791		−0.221	0.850		−0.266	0.877	
High school (abitur) or above	−0.240	0.685		−0.394	0.834		−0.304	0.896		−0.275	0.916	
Mother was working during childhood												
No	−0.031	0.091	0.740	−0.043	0.096	0.660	−0.037	0.099	0.710	−0.005	0.099	0.960
Yes	0.031	0.091		0.043	0.096		0.037	0.099		0.005	0.099	

Table 5 continued

Predictors	Observed effects (bivariate)			Step 1 adjusted effects			Step 2 adjusted effects			Step 3 adjusted effects		
	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value
Quality of the parental relationship (good–bad)	−0.048	0.090	0.590	−0.075	0.097	0.440	−0.036	0.097	0.710	−0.053	0.094	0.570
TVC duration of the marriage (=months/12)	0.170	0.025	0.000	0.157	0.036	0.000	0.126	0.039	0.001	0.078	0.041	0.056
TVC Duration of the cohabitation (=months/12)	0.125	0.031	0.000	0.068	0.035	0.052	0.078	0.036	0.029	0.068	0.037	0.068
Educational level of respondent												
Primary and/or secondary 1 (until age 15)	0.389	0.143	0.019	0.443	0.173	0.015	0.272	0.179	0.100	0.145	0.184	0.300
Vocational/apprentice	−0.110	0.160		−0.244	0.187		−0.320	0.194		−0.317	0.195	
Vocational	−0.272	0.198		−0.199	0.212		−0.113	0.213		0.008	0.213	
High school (abitur) or above	−0.007	0.262		0.000	0.300		0.161	0.308		0.164	0.306	
Occupational situation and status												
Never worked	−0.799	0.270	0.001	−0.577	0.293	0.010	−0.552	0.302	0.012	−0.460	0.302	0.014
Currently not blue collar	0.620	0.314		0.905	0.337		1.012	0.342		0.881	0.341	
Currently blue collar	0.081	0.293		−0.284	0.313		−0.170	0.318		−0.126	0.318	
Currently not white collar	0.499	0.258		0.466	0.268		0.477	0.271		0.652	0.280	
Currently low-level white collar	0.368	0.245		−0.051	0.267		0.058	0.272		0.033	0.276	
Currently mid-level white collar	0.276	0.206		0.233	0.228		0.238	0.228		0.301	0.230	
Currently high-level white collar	0.510	0.253		0.578	0.273		0.523	0.285		0.513	0.283	
Currently self-employed	−0.822	0.894		−0.922	0.916		−1.170	0.925		−1.586	0.938	
Other	−0.732	0.464		−0.347	0.489		−0.416	0.492		−0.210	0.495	

Table 5 continued

Predictors	Observed effects (bivariate)			Step 1 adjusted effects			Step 2 adjusted effects			Step 3 adjusted effects		
	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value	Class 1	SE	Wald p-value
LC traditional family values and autonomy												
LC 1	0.455	0.187	0.000				0.417	0.195	0.021	0.379	0.195	0.062
LC 2	0.875	0.181					0.574	0.198		0.432	0.204	
LC 3	0.294	0.214					0.242	0.223		0.283	0.224	
LC 4	−1.395	0.430					−1.259	0.440		−1.190	0.440	
LC 5	0.265	0.239					0.250	0.247		0.357	0.250	
LC 6	−0.494	0.430					0.225	0.441		−0.262	0.441	
Religiosity												
Catholic with high bond	0.295	0.171	0.007				0.252	0.184	0.028	0.168	0.185	0.008
Catholic with low bond	−0.565	0.207					−0.535	0.218		−0.618	0.219	
Protestant with high bond	0.084	0.257					−0.034	0.271		0.054	0.267	
Protestant with low bond	−0.267	0.224					−0.302	0.231		−0.507	0.238	
Other	0.318	0.485					0.226	0.502		0.463	0.505	
Not religious	0.135	0.358					0.392	0.383		0.441	0.379	
Intention to become a parent within 2 years												
No	−0.727	0.089	0.000							−0.536	0.109	0.000
Yes	0.727	0.089								0.536	0.109	

together the information of three models with stepwise included additional variables. The first column, however, refers to the observed (bivariate) relationships and is used as a comparative basis. Coefficients (betas) can be interpreted as the additive effect on the monthly log-odds of motherhood for each unit change in the independent variable (if continuous indicator) or for each category relative to the overall effect (in case of categorical covariates). For ease of exposition, we will often refer to these effects as "effects on the likelihood of motherhood". Associated standard errors for each coefficient are also presented together with the *p*-value of the Wald statistic which indicates the overall significance of a particular variable.

6 Results

6.1 Attitude Profiles and Motherhood

The results of the LC profile variable displayed in Table 5 indicate that this attitude typology has a strong autonomous predictive power on motherhood. Even including the "intention to become a parent" indicator in the final step does not completely mediate the effect of the LC attitude typology on motherhood. As we expected, the second "traditional family oriented" category (LC 2) was the most likely to make the transition, whereas the fourth' "egalitarian" type (LC 4) was the least likely to become mother. The contrast between these two categories diminishes when other covariates are included (step 2) and further diminishes when the intention variable is added (step 3), but the difference remains consistent and significant. The effect of the other categories of the LC typology partly confirms our hypothesis while at the same time demonstrates some striking findings. The first category (LC 1), which primarily stresses the quality of the family relationship and which has average scores on other attitudes, was expected to have a higher risk of motherhood. This is observed, but what is remarkable is that by introducing the control variables, the likelihood of becoming a mother for this first latent class hardly changes. As a result, there is almost no difference with respect to the second "traditional family oriented" latent class (LC 2). An unexpected finding is that the fifth latent class (LC 5), which holds a traditional view on marriage while also stressing the importance of work, has a higher than average likelihood of motherhood. After all, this category also indicated that children do not give special meaning to the life of women and hence expressed hesitation in taking up multiple roles. After introducing controls, and especially the "intention to become a parent" variable, the likelihood of becoming a mother for this fifth latent class is only slightly lower than it is for the second "traditional family oriented" latent class. Furthermore, we observe that the third category (LC 3), which highlights the equivalence of roles, has a higher than average likelihood of motherhood and the difference with the "traditional family oriented" latent class also diminishes when control variables are included. This finding is much more consistent with the idea that a willingness to take up multiple roles, as expressed in attitudes measured prior to the transition, increases the likelihood of motherhood. Finally, the sixth "ambivalence" latent class (LC 6) has a less than average likelihood of motherhood, but this category lags far behind the

"egalitarian" type (LC 4). Taken together, these findings indicate that there is no single class of young women that stands out as a pro-motherhood class, rather there are different latent classes with almost equal likelihoods of becoming a mother. There is, however, one particular class (LC 4), i.e. the "egalitarian" class, which clearly inhibits the transition to the first child. The attitude profile of this latent class nicely corresponds with the profile that is sketched by the Second Demographic Transition theory, i.e. a non-traditional view on family attitudes combined with a focus on personal autonomy and self-actualization.

6.2 Religiosity and Intentions

Religious affiliation has a strong influence on the transition to motherhood. Both Catholics and Protestants with low affiliation have a lower risk of motherhood, and the contrast with all other categories becomes even more pronounced when introducing control variables. A dissociation with religious morals seems to imply a dissociation with motherhood. When the "intention to become a parent" variable is included, the differences between Catholic and Protestants, with comparable levels of affiliation, completely disappear. There is hardly any difference between Catholics and Protestants with low affiliation. The same is true for adherents to both denominations when they demonstrate a higher level of affiliation with their religion. As such these findings demonstrate the mediating effect of the intention variable.

In the previous section, we already indicated that the intention variable reduces the differences among latent classes who experience a higher than average chance of motherhood. Not surprisingly, women who intend to become a parent within the next 2 years also experience the event more than those women who stated no such intention.

6.3 Family Antecedents and Early Adulthood Experiences

The primary focus of this research was the attitude–behaviour relationship. Family antecedents and early adulthood experiences merely function as control variables. However, having a closer look at the effect of these background characteristics might reveal to what extent the LC attitude variable mediates some of these effects of background characteristics. First, it is worth mentioning that a number of these background characteristics, especially the family antecedents, proved not to be significantly related to the transition to motherhood—even in the observed (unadjusted) models. Among the remaining significant variables, there is evidence of the mediating effect of the LC attitude profile and the intention variable. Both the effects of birth cohorts and education on motherhood diminish when the LC profile and religiosity variable are included in the model, to the extent that birth cohort and education are no longer significantly related to motherhood. Adding the intention variable only adds up to the diminishing significance of educational and cohort differences. The length of the marriage appears to be more important than the length of the coresidential relationship. Adding attitudes and religiosity does not change this finding. However, including the "intention to become mother" variable almost

completely levels off this difference in influence between marriage and cohabitation. Hence, part of the effect of marriage is mediated by the intention to become a parent. This is a nice illustration of planned behaviour, since the reason why marriage moves these young women to the parental status much sooner than cohabitation is that marriage and parenthood are linked planned behaviours. That is why the intention to become a mother mediates the effect of marriage on motherhood. Finally, the effect of occupational situation and status indicates that women who were not working at the time of the first interview have a higher likelihood of motherhood. At the same time we observe that higher status occupations also have a higher likelihood. This latter finding seems to be counter-intuitive—especially when viewed in the light of Gary Becker's argument (1981) that high status working women would be the least likely to opt for family ties. However, it has been suggested that parenthood might be postponed until an economically favourable occupational position is achieved (Duvander and Andersson 2005). This might also explain why the category of self-employed women has a very low likelihood of motherhood. Nevertheless, the differences between occupational categories hardly change when ideational variables are included. By consequence, no mediating effect of attitude profiles or intention is observed.

7 Summary and Discussion

In this article, we have demonstrated the usefulness of an empirical typology of attitude profiles in explaining the transition to motherhood. The principal reason for exploring a latent attitude profile was that ideational theories often refer to distinct attitudes or values that are assumed to influence behaviour simultaneously. The benefit of a latent class cluster approach is that it identifies segments in the population that share a common latent profile on this broad range of attitudes. The results clearly identified one particular latent class of young adult women for which the attitude profile inhibited the transition to motherhood. This latent "egalitarian" class highly values personal freedom and being independent, and at the same time assigns little meaning to having children and marriage, does not think it is important to have children and does not agree with an exclusive domestic role for women. Scores on work related attitudes were neutral. The estimated class size of this category was nearly 15%. A smaller (7%) category of "ambivalent" respondents, who agreed with statements referring to children giving meaning to life but disagreed with finding it important to have children and a good family life, also had a slightly less likelihood of making the transition to first birth. The other four latent classes experienced very similar higher transitions rates after controlling for family antecedents and early childhood indicators. Their latent attitude profile, however, was quite diverse. Not surprisingly the counterpart of the "egalitarian" latent class, i.e. the "traditional family oriented" class (=23%), which combines positive evaluation of familistic attitudes with low preferences in terms of autonomy and self-development, was more likely to become a parent. The largest latent class (LC1 = 25%), however, that has a less "traditional" attitude, proved to have a very

similar risk of motherhood. This class was less traditional because, compared to the "traditional family oriented" class, it assigned less meaning to children and marriage and the female household role, but agreed that having children and being a good mother and partner is important. Hence, we are dealing with a class for whom the quality of their family life is important, though not at odds with a less traditional family value orientation. A third category with a similar positive likelihood of motherhood and which we labelled as the "equivalence" class, valued both familistic attitudes and attitudes referring to personal freedom, autonomy and self-development. This indicates that women who identify with multiple roles do not necessarily experience lower parental transition rates than women who primarily focus on their family role. Finally—and contrary to our expectations—the latent class that assigned a high meaning to having a job while agreeing with a "traditional" view on marriage, also had a higher likelihood of motherhood than average. This was unexpected because this latent class also indicated that children are not necessary to give meaning to their life. Nevertheless, this research has demonstrated that distinct latent profiles may increase the likelihood of motherhood, but that there is clearly one profile that inhibits this transition, i.e. a class of women that highly values autonomy and independence, while at the same time not agreeing with "traditional" familistic attitudes.

Like most research, this work also raises some questions. The ideational theories that guided our research are "general" theories that can be applied in different contexts. The empirical analyses, however, are restricted by the data properties, i.e. they pertain to young adult women from Nordrhein-Westfalen in Germany during the 80s. The key question of this research was whether a latent class typology approach *can* contribute to explaining the transition to motherhood, and the results clearly demonstrate that. Parenthood, however, is not restricted to motherhood and from a gender perspective it could be asked whether a latent attitude profile of men would look similar to the one that is researched in this article. Similar questions can be asked by referring to space and time, i.e. will the same or similar latent profile emerge in different cultures (countries) and at different times? These types of questions concern the issue of equivalence in measurement (Van de Vijver and Leung 1997). To research these kinds of questions, we need cross-cultural longitudinal comparative data for men and women. International comparative panel data that include a sufficient set of attitudes are, however, scarce. Related questions are whether the effect of the latent class typology will be similar between men and women or between different cultures, and whether effects may change over time. Again, this question goes beyond the limits of our research. Regardless of the boundaries of our research, however, we were able to demonstrate the benefits of adopting a latent class typology of attitudes in explaining a demographic transition in the life course of young adult women. This is the major contribution of this work.

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